

EN IEC 62311:2020
ASSESSMENT REPORT

For

Shenzhen Sonoff Technologies Co.,Ltd.

1001, BLDG8, Lianhua Industrial Park, shenzhen, GD, China

Tested Model: DUALR2

Report Type: Amended Report	Product Type: 2-Gang WiFi Smart Switch
Report Number:	RDG201223015A1
Report Date:	2021-01-28
Reviewed By:	Allen Qiao RF Supervisor
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.12, Pulong East 1 st Road, Tangxia Town, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RDG180807016	Original Report	2018-08-30
1	RDG201223015A1	Amended Report	2021-01-28

Note: This is the amended report application which was based on the original report. The differences between them as following:

- 1) Change the Applicant's address to 1001, BLDG8, Lianhua Industrial Park, shenzhen, GD, China.
- 2) Upgrade the standard to EN IEC 62311:2020
- 3) Changed the bridge rectifiers.
- 4) Add relay

The change between the previous equipment and the current equipment is stated and guaranteed by the applicant. The difference between them will not affect the test items, we will keep all of the test results, and update EUT photos.

Declarations

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "△". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

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This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk "★".

EXHIBIT A – EUT PHOTOGRAPHS

For photos in this section, please refer to report No.: RDG201223015-02 A1 EXHIBIT A.

FINAL

BELOW IS THE ORIGINAL REPORT

EN 62311:2008
ASSESSMENT REPORT

For

Shenzhen Sonoff Technologies Co.,Ltd.

Room 1001, 10F, Building 8, Lianhua Industrial Park, Longyuan Load, Longhua District,
Shenzhen, GD, China

Tested Model: DUALR2

Report Type: Original Report	Product Type: 2-Gang WiFi Smart Switch
Report Number: RDG180807016	
Report Date: 2018-08-30	
Reviewed By: Robin Zheng RF Engineer	<i>Robin Zheng</i>
Test Laboratory: Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn	

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Dongguan).

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

EUT Name:	2-Gang WiFi Smart Switch
EUT Model:	DUALR2
Rated Input Voltage:	100~240Vac
External Dimension:	114mm(L)*51mm(W)*32mm(H)
Serial Number:	180807016
EUT Received Date:	2018/8/10

Objective

This report is prepared on behalf of *Shenzhen Sonoff Technologies Co.,Ltd.* in accordance with EN 62311:2008, Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

The objective is to determine the compliance of EUT with EN 62311:2008.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All measurements contained in this report were conducted with EN 62311:2008.

Technical Requirements Specification in EN 62311

General Description of Applied Standards

EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

RF Exposure Evaluation

Limit:

According to EN 62311, the criteria listed in the below table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified table 2 of Council Recommendation 1999/519/EC.

Reference levels for electric, magnetic and electromagnetic fields
(0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field(μ T)	Equivalent plane wave power density $S_{eq}(W/m^2)$
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Notes:

- f as indicated in the frequency range column.

Test method

The antenna of the product, under normal use condition is at least 20cm away from the body of the user. Warning statement of the user for keeping 20cm separation distance and the prohibition of operating to a person has been printed on the user manual. So, this product under normal use is located on electromagnetic far field between the human body.

Far Field Calculation Formula

$$E = \frac{\sqrt{30PG(\theta, \phi)}}{r}$$

G= antenna gain relative to an isotropic antenna

θ, ϕ = elevation and azimuth angles to point of investigation

r= distance from observation point to the antenna

Test Data

Test Mode: Transmitting

Mode	EIRP	EIRP	E-Field Strength	E-Field Limit	Result
	(dBm)	(W)	(V/m)	(V/m)	
2.4G WIFI	16.97	0.05	6.12	61	Pass

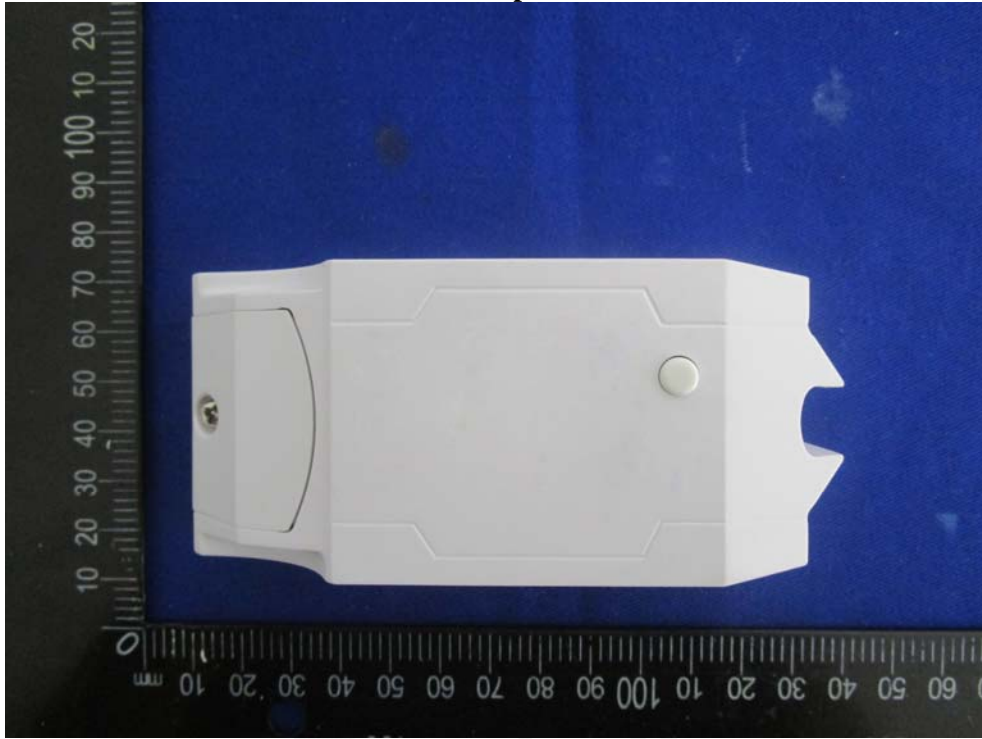
Note:

The distance from observation point to the antenna is 20 cm.

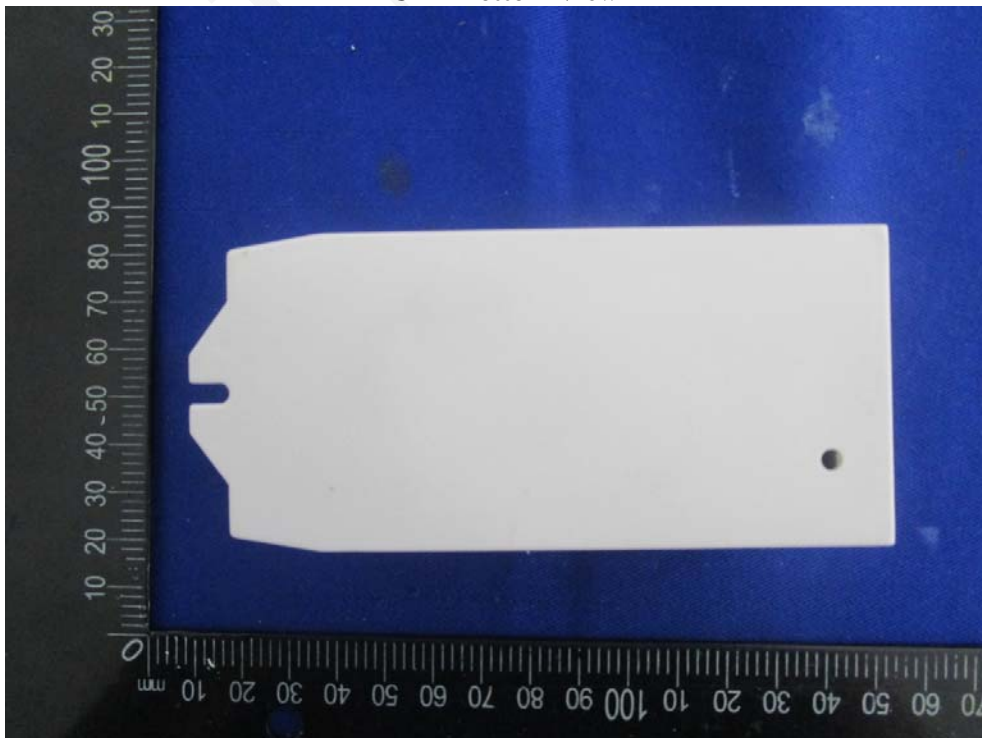
Conclusion: Compliance

EXHIBIT A - EUT PHOTOGRAPHS

EUT – Top View



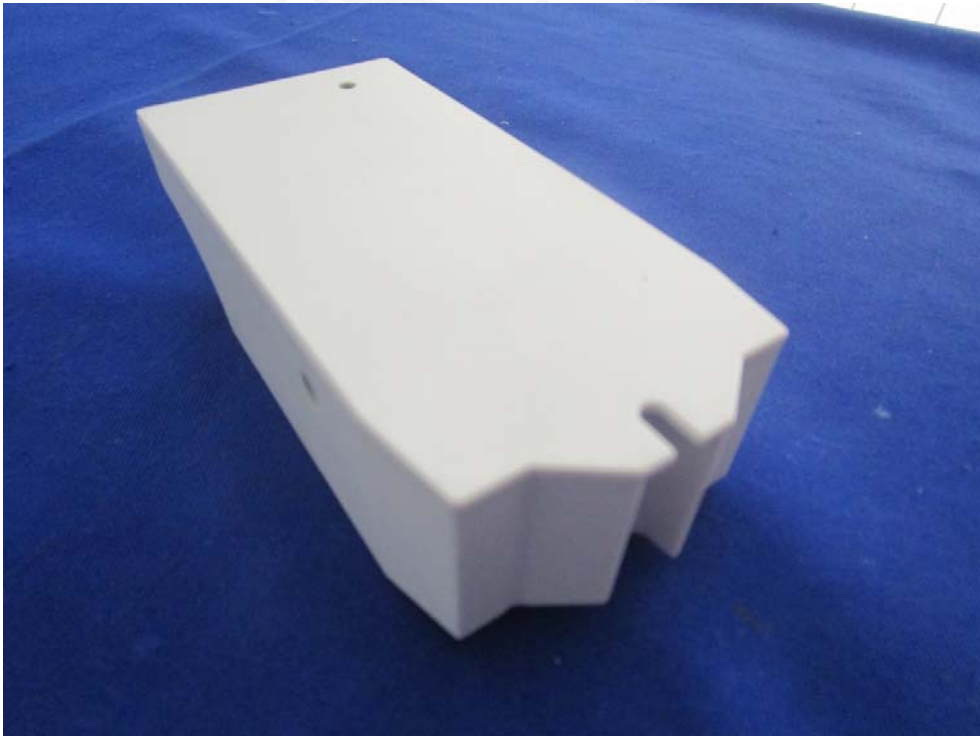
EUT – Bottom View



EUT – Side View



EUT – Side View



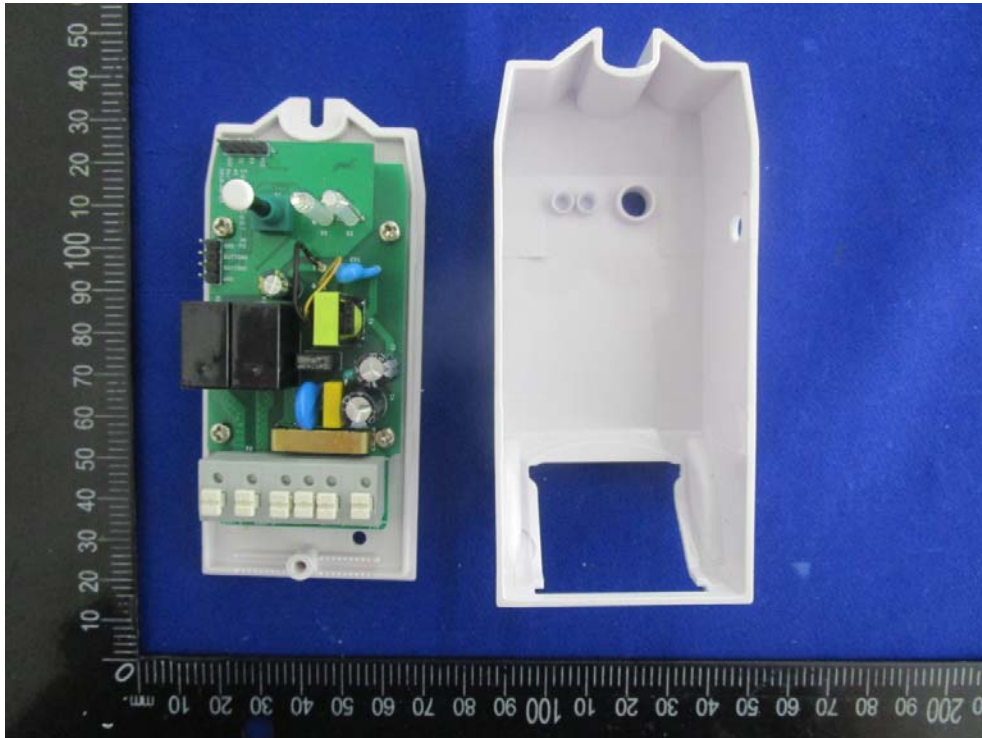
EUT – Ports View



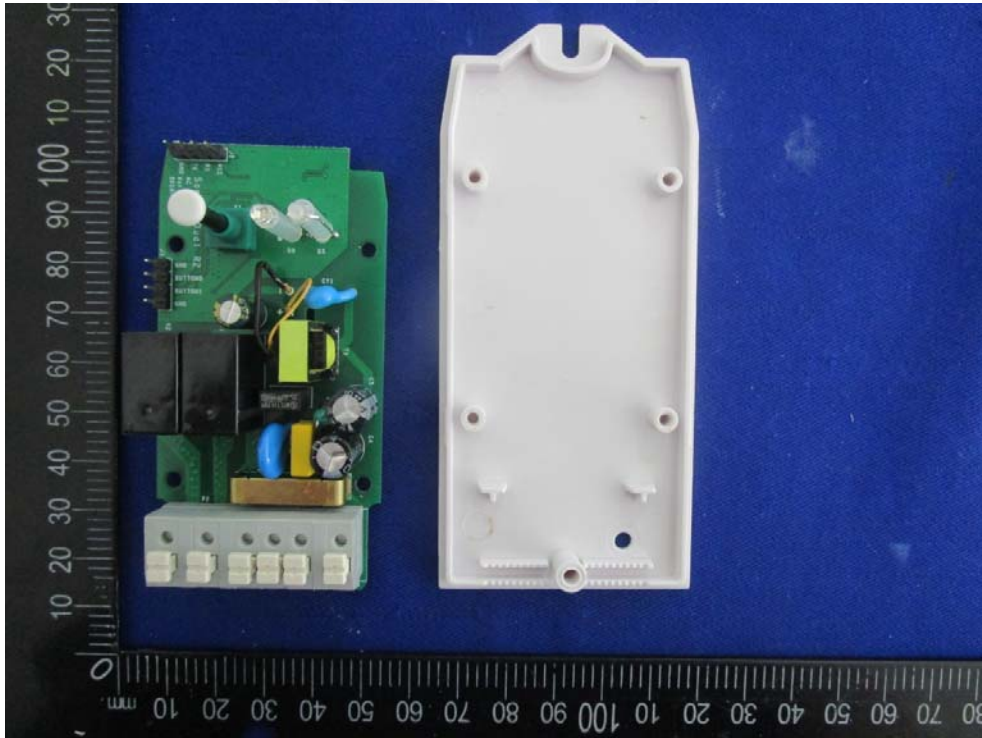
EUT – Uncover View



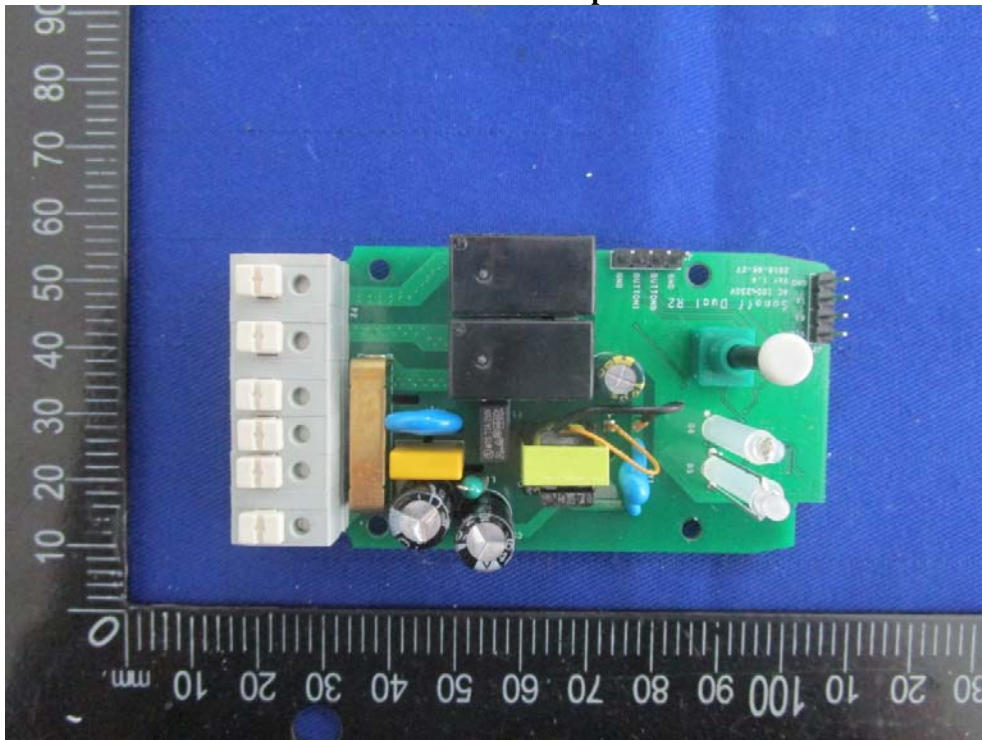
EUT – Uncover View



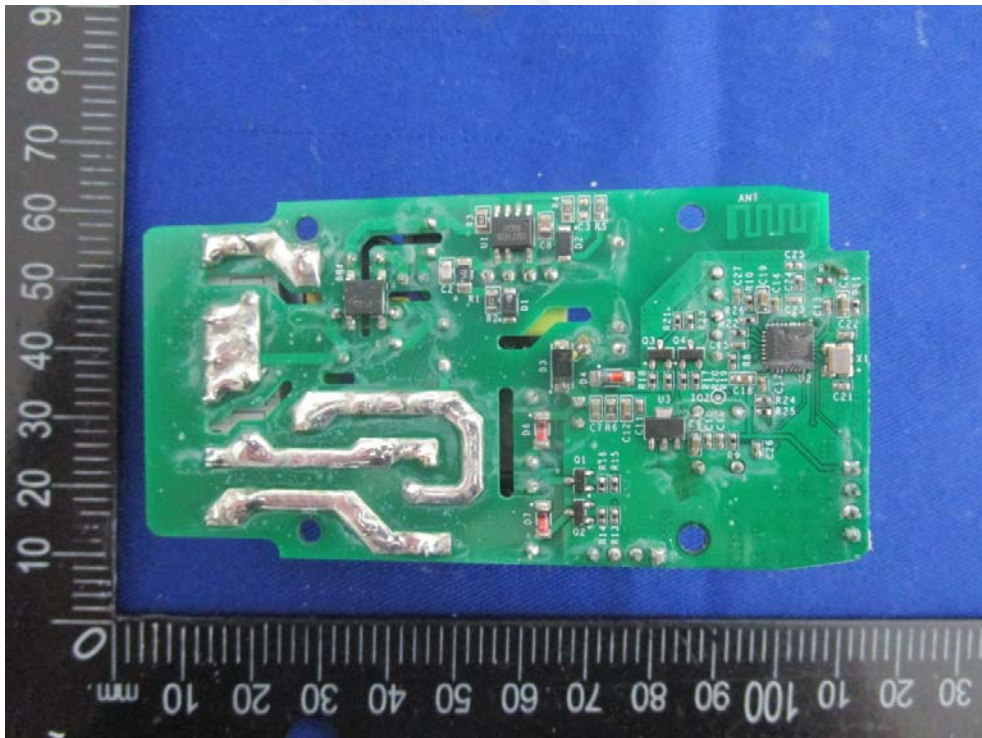
EUT – Uncover View



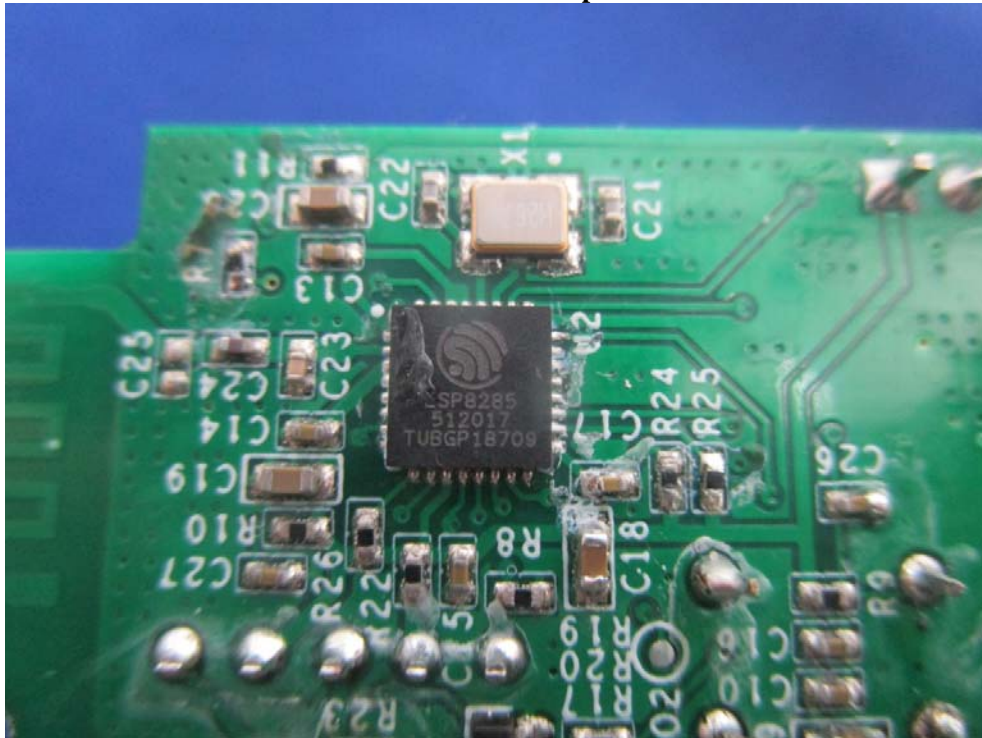
EUT – Main Board Top View



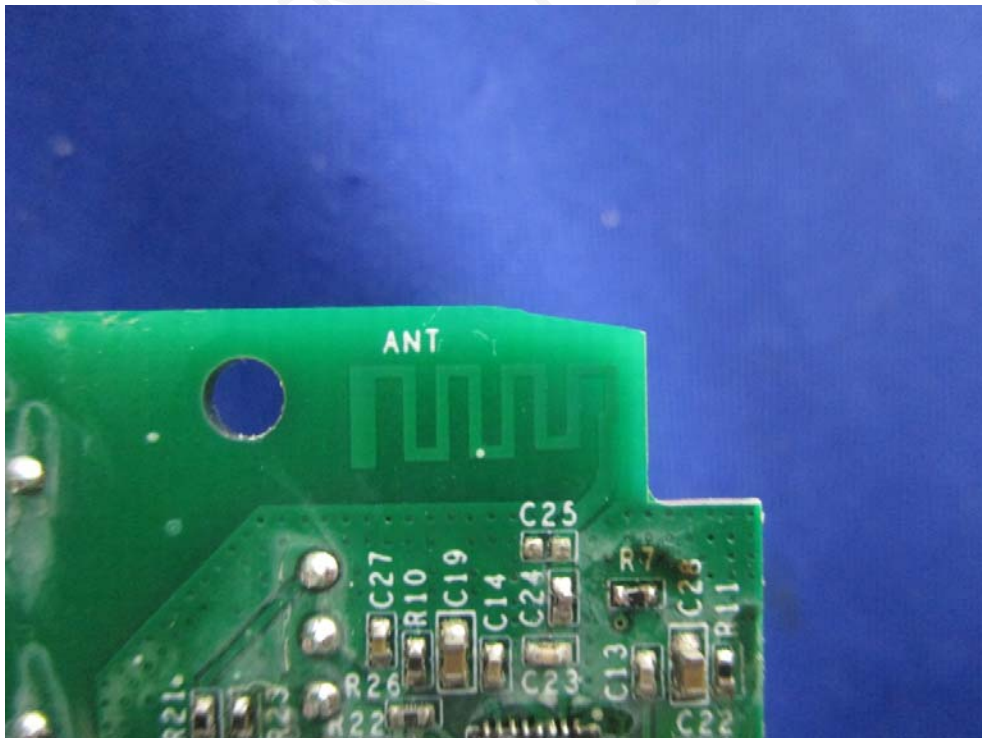
EUT – Main Board Bottom View



EUT – 2.4G Wifi Chip View



EUT – Antenna View



*******END OF REPORT*******